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~~Dear~~  
Dear Prof. Kevles:

Thank ~~you~~ you for your answer to my wife's inquiry concerning arginase and the Shope papilloma virus. Unfortunately I did not see your article in the New Yorker nor her letter. Neither did I see French Anderson's Section on Genetic Therapy published in 1972. This was the time of the peak of the reaction to such Genetic intervention, as you probably remember. I am not personally acquainted with Dr. Anderson except through correspondence and telephone calls received in the Spring and Summer of 1984 but am pleased to report that these contacts, largely informational, he appeared wholly interested in as well as a supporter of my work. I thought you would find the facts as I encountered them of particular interest as ~~they~~ you were apparently given some erroneous information by your source.

First in relation to the work being halted because the experiment did not result in a diminution in the blood arginine levels:

My work prior to ~~involvement~~ involvement with the German children, and because of which ~~to whom~~ I was introduced by Lederberg, was primarily concerned with rabbits and Shope virus induced papillomas. Rabbits infected with the Shope virus develop low blood arginines if the skin is inoculated and/or low blood arginines. Mice, rats, ~~monkeys~~ and monkeys following inoculation develop low blood arginines but dogs (Beagles) do not. People who have worked with the virus either in the laboratory or in animal care often develop low arginines. Further with the exception of the laboratory workers and helpers the contact was with purified virus. Dr. Shope inoculated himself with the virus in 1933. His serum taken two years later revealed the lowest blood arginine yet encountered. *His reaction to the inoculation was positive at the site. The virus being cultured from the site of the inoculation was shown to be the same.*

It is clear that association with this virus causes a drop in the blood arginine in several species including man. The classic geneticists at Oak ridge were so taken aback by these findings

To 5/15/57

some did not want the information to be made public. At an information meeting held in Oak Ridge the National Cancer Institute representatives for whom I ~~was~~ worked as well as those of the AEC heard of these findings and felt that they should be confirmed in blind tests by an independent laboratory. This I felt was an excellent idea. These tests were carried out with the cooperation of Dr. C.A. Evans Chairman of Microbiology at the University of Washington and Dr. Ray Bryan of the National Cancer Institute who arranged for the independent laboratory in Philadelphia. Our results were precisely repeated in each instance. It was clear that at least in the species tested including man that we had a means to control the blood arginine~~xx~~ by virus infection, suggesting that certain metabolic deficiency diseases could be similarly approached therapeutically. *at this time being introduced to the German birds.*

Tissue cultured ~~from~~ fibroblasts from two of the German sisters with argininemia were also infected with the virus and the specific arginase induced and demonstrated there in. *These cells in culture in effect were.*

In no instance have any of these infected people or any of the animals tested developed changes other than a low arginine except for the rabbit which developed papillomas at the inoculation site. *Dr. Shope thought it was interesting.*

Second - That our work was halted ~~only~~ because the experiment did not work:

In a Study Section report concerning review of a related application involving the Shope and received after I had moved to Memphis from Oak Ridge because of support problems in a Federal Laboratory, it was stated that I was likely to infect all the students the faculty, and maybe kill a third of the people in Memphis. "Disapproval." Another application similar in general but dealing with modification of the tobacco mosaic virus RNA by addition of nitrogen fixing information carried by a plasmid to TMV RNA and subsequently infecting plants such as the turnip, elicited the response that I might end-up with a Kudzu-like plant that might take over the world.

"Disapproval." *No reference was made as to whether the virus did or did not cause the disease. This might have been said until then clinical trials were being done with that infected cells in the body.*

At times I think that in the Middle Ages I would have been burned at the stake instead I appear to have received its modern equivalent.

Species  
Species

At Cal Tech Ray Owen ~~we~~ knew in some detail of this work with the Shope, as did Sinsheimer, ~~Whitman~~ Dulbecco, and Dr. George Beadle before thy left. At Johns Hopkins, Horace Judson now in a position similar to yours, who<sup>n</sup> you doubtless know, has been as closely associated with these children as any one except the parents and European doctors directly involved.

A reprint is enclosed.,  
Thanks.

*Shouldn't tell it may be hard to get at all  
elaborate but under complex conditions  
with stability, rate of administration etc*

Sincerely yours,

Stanfield Rogers, M.D.  
Prof: Biochemistry  
Prof: Microbiology  
Retired

P.S. There is an excellent review of this field (1984) in which you would be interested. The book is The Gene Doctors, by Yvonne Baskin, William Morrow and Co. Inc., New York, New York, 1984.

*f. N. 11/1  
J-118 etc.*